

A Study of the Adsorption of Organic Vapors on an  
Organic Adsorbent From the Quenching of  
Fluorescence, by S. P. Tibilov, 18 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, 1940,  
pp 953-963. 9093973

ABC Tr-5228

Sci - Phys, Chem  
Sep 62

212, 691

The Mechanism of the Functioning of the Nickel Oxide Electrode, by B. V. Ershler, G. S. Tyurikov, and A. D. Smirnova, 9 pp.

RUSSIAN, per, Zhur. Fiz. Khim., Vol 14, 1940,  
pp 985-988.

SLA Tr R-1013  
4

Sci

65,793

Measurement of Small Vapor Pressures. III.  
Measurement of the Vapor Pressures of Halogen-  
Substituted Benzenes, by A. A. Zil'berman-  
Granovskaya, E. A. Shugam,

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, No 7,  
1940, pp 1004-1006.

ATS RJ-2188

Sci - Chem

May 60

115,452

Combustion of Nitroglycol, by A. F. Belyakov, 32 pp.  
UNCLASSIFIED

RUSSIAN, por, Zhur Fiz Khim, Vol XIV, No 8, 1940,  
pp 1009-1025.

Sci Tr Center  
RT 1023

Scientific - ~~Physical~~ Chemistry

15370

(NY-4840)

Theory of Thermal Explosions III. Thermal Explosions in Autocatalytic Reactions, by O. M. Todes, P. V. Molent'yov, 28 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, No 8, 1940,  
pp 1026-1042.

JPRS 7160

Sci - Phys

133, 546

Nov 60

Photoelectrochemical Processes on Iron in  
the Presence of Hydrogen Peroxide, by V. I.  
Veselovskiy.

RUSSIAN, per, Zhur Fiz Khim, Vol XXIII, No 9,  
1949, pp 1095-1105.

AT&T RJ-1151

Sci - Phys, Chem

Apr 60

114,513

Surface Tension in Binary and Ternary Mixtures of  
Oxides, by P. P. Kozakevich, A. F. Kononenko, 16 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, 1940, pp 118-  
1127.

SLA R-2801

Sci

Jul 59

92, 408

Temkin, M. I.  
KINETICS OF HETEROGENEOUS CATALYTIC PROCESSES. [1961] 7p.  
Order from OTS or SLA \$1.10

61-18110

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1940,  
v. 14, no. 9/10, p. 1153-1158.

DESCRIPTORS: \*Catalysis, Analysis, \*Reaction kinetics, Chemical reactions, \*Adsorption.

The Langmuir theory of kinetics of chemical reactions is insufficient for explanations of all facts encountered in catalysis. A discussion of research at the Karpov Institute cites an expression for the adsorption isotherm and its experimental support for specified cases. (Author)

(Chemistry--Physical, TT, v. 6, no. 8)

61-18110

1. Title: Langmuir theory  
I. Temkin, M. I.

105135

Office of Technical Services

Para-Ortho Conversion of Hydrogen and the Exchange  
Reaction Between Light and Heavy Hydrogen on Charcoal,  
by R. Burstein.

RUSSIAN, <sup>in</sup> per, Zhur Fiz Khim, No 14, 1940, pp 1195-1199.

\*ATIC

Sci - Chemistry

Apr 57 CTS

Kinetics of Ammonia Synthesis, by V. A. Roiter, 15 pp.

RUSSIAN. per, Zhur Fiz Khim, Vol XIV, 194<sup>0</sup>, pp  
1229-1240.

SLA R-2961

Sci

Jul 59

92, 428

Kinetics of Ammonia Synthesis, by M. I. Tunkin, 6 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, 1940, pp  
1241-1245.

SLA R-2944

Sci

Jul 59

92,437

Mechanism of the Catalytic Synthesis of Ammonia, by  
P. V. Usechev, 5 pp.

RUSSIAN, per, <sup>u</sup> ZHAR Piz Khim, Vol XIV, 1940, pp  
1246-1249.

SLA R-2960

Sci

Jul 59

92,436

Effect of Poisons on the Rate of Hydrogenation of  
Adsorbed Nitrogen, by K. Y. Kozhenova, M. Y.  
Kagan, 13 pp.

RUSSIAN, er, Zhur Fiz Khim Vol XIV, 1940,  
pp 1250-1259.

SLA R-2975

Sci

Jul 59

92, 344

Analysis of the Process of Reduction of Ammonia  
Catalysts, by S. S. Lechinov, 17 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, 1940,  
pp1260-1270.

SLA R- 2966

Sci

Jul 59

92, 349

(BY ~~4844~~)

The Formation of Catalysts for Destructive Hydrogenation, by G. N. Maslyanskiy, P. S. Shenderovich, 10 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, No 9/10, 1940, pp 1301-1307.

JPRS 7527

Sci - Chem

Feb 61

139,376

(NY-4844)

The Catalytic Hydrogenation and Polymerization of Acetylene-Hydrogen Mixtures. The Synthesis of Isobutylene From Acetylene and Hydrogen, by A. D. Petrov, L. S. AUTOM, 8 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, No 9/10, 1940, pp 1303-1311.

JPRB 7528

Sci - Chem

Feb 61

189358

Low-Temperature Oxidation of Nitric Oxide, by L. S.  
M. Gibyanakdy, S. Z. Roginskij, 8 p.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, 1940, pp  
1347-1352.

SLA R-2962

Cc1

Jul 59

91, 4411

Optical Studies of Activated Absorption,  
by A. N. Teremin, 15 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, 1940,  
pp 1362-1369. 9066970

AEC Tr-5227

Sci - Phys  
Oct 62

212, 640

Vibration Spectra of Hydrocarbon Molecules, IV. A General Method of Constructing Equations for Calculation of Vibrations of Complex Molecules, by M. A. El'yashevich, 21 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, No 11, 1940,  
pp 1381-1395.

Sci Trans Center RT-410

10,896

Scientific - Physics  
CTS/DEX

Solubility of Lithium in Its Fused Chloride Salt, by S. Karpachev, E. Jordan, 5 pp.

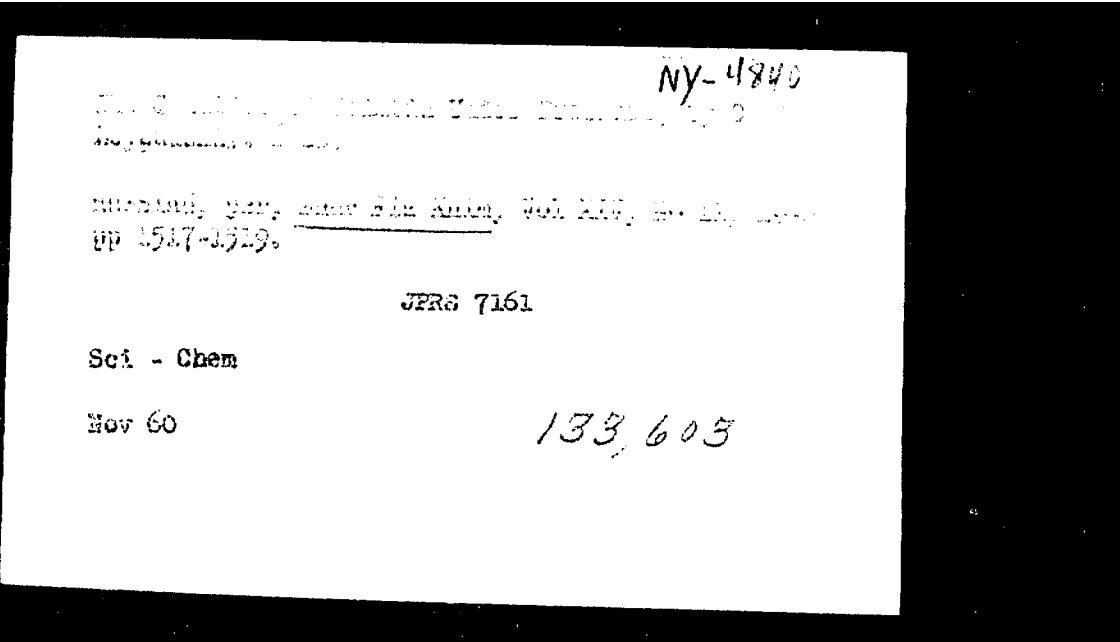
RUSSIAN, per, Zhur Fiz Khim, Vol XIV, 1940, pp 1495-1497.

AEC Tr 321?

See - Other

Copy 50

73, 72?



(NY 1-811)

On Sulfur Monoxide, by E. Kondrat'eva, V.  
Kondrat'eva, 13 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, No 12, 1940,  
pp 1528-1534.

JPRS 7529

Sci - Chem

Feb 61

139,955

Exchange Reaction Between Hydrogen and Deuterium  
in Heterogeneous Systems, by L. V. Korchagin,  
M. I. Urisko, 15 pp.

RUSSIAN, par, Zhur Fiz Khim, Vol XIV, No 12,  
1940, pp 1566-1568.

MIN 8-7-61

175, 041

Sci - Med

Active Contacts, Their Formation and Nature, by S. Z.  
Roginskiy, 34 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XV, 1941, pp 1-30.

SIA R-2952

Sci

Jul 59

92,427

The Problem of the Absolute Velocity of Heterogeneous Reactions, by K. S. Bagdasar'yan, 12 pp.

RUSSIAN, per, Zhur Fiz, Khim, Vol XV, 1941, pp 40-49.

SLA R-2947

Sci

Jul 59

92, 384

Vibration Spectra of Hydrocarbon Molecules. V.  
Calculation of Frequencies of the Valence  
Oscillations of Carbon Chains of the Olefin  
Series, by B. I. Stepanov, 17 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XV, No 1,  
1941, pp 78-90.

10,938

Sci Trans Center RT-411

Scientific - Physics CTS/DEX

The Operation of Blowers in the Chemical Works of  
Konstantinovsk, by I. I. Zaring, 4 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol IV, No 2, 1941,  
pp 6-7.

SLA 60-17722

Sci

190, 266

Apr 62

Vol IV, No 6

X-Ray and Electronographic Investigation of  
the Products of Iron Corrosion, by N. A.  
Shishakov, P. S. Moiseev

RUSSIAN, per, Zhur Fiz Khim, Vol XV, 1941,  
pp 101-108.

AEC Tr 1155

Scientific - Chemistry

Shishakov, N.A. and Moiseev, P.S.  
ONDERZOEK VAN DE CORROSIEPRODUCTEN VAN  
IJZER MET RÖNTGEN- EN ELECTRONENDIFRACTIE  
(Electron-diffraction and x-ray investigation of  
the products formed in the corrosion of Fe). 14 p.  
25 refs. MTWL: 455 (Text in Dutch). 14 p.  
Order from OTS or ETC \$1.85. 61-17044

Trans. of Zhurnal Fizicheskoi Khimii (Ussr) 1941,  
v. 15, p. 101-108.

DESCRIPTORS: \*Electron diffraction analysis,  
\*X-ray diffraction analysis, \*Iron alloys, Corrosion.

61-17044

I. Shishakov, N.A.  
II. Moiseev, P.S.  
III. MTWL-455  
IV. Stichting Moellijk  
Toegankelijke Wetenschappelijke Literatuur.

Office of Technical Services

Photogalvanic Processes on a Silver Electrode,  
by V. I. Veselovskiy, 16 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XV, 1941,  
pp 145-155. ~~EX-2000~~ 9093971

AEC Tr-5231

Sci - Phys, Chem  
Sep 62

212, 693

Mechanism of the Catalytic Oxidation of Ammonia,  
by P. M. Vinshtein, M. V. Polynkov, 10 pp

RUSSIAN. Ser, Zhur Fiz Khim, Vol XIV, 1941, pp  
164-173.

SLA R-2951

Sci

Jul 59

92, 441

Heterogeneous Equilibria in the Ammonia-Nitrogen System at High Pressures, by I. R. Krichevskiy, P. E. Bolshakov, 10 pp.

RUSSIAN, Per, Zhur Fiz Khim, Vol XV, No 2, 1941,  
pp 184-192.

SLA R-2950

Sci

Jul 59

92,411

Compressibility of Gaseous Mixtures II. P-V-T  
Data for Binary and Ternary Mixtures of Methane,  
Nitrogen and Hydrogen. (I), by ~~and~~ I. R.  
Krichevskiy, G. T. Levchenko, 6 pp.

No 2  
RUSSIAN, per, Zhur Fiz Khim, Vol XV, 1941, pp  
193 197.

SLA R-2948

Sci

Jul 59

92, 409

Pshezhetekli, S. Ya. and Gladyshev, A. T.  
KINETICS OF CATALYTIC DIMERIZATION OF  
ETHYLENE. [1961] 14p. 18 refs.  
Order from OTS or SLA \$1.60 61-18012

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1941,  
v. 15, p. 333-345.

DESCRIPTORS: \*Ethylene, Polymerization, Chemical  
reactions, Nickel catalysts.

The kinetics of dimerization of ethylene on a nickel  
catalyst was determined, and it was established that  
the velocity of dimerization is proportional to the  
pressure of ethylene in the gaseous phase in the first  
degree. The apparent energy of activation of the reac-  
tion is about 10,500 cal/e. The results obtained were  
interpreted with the aid of the regularities character-  
istic for the kinetics of reactions occurring on non-  
uniform surfaces. (Author)  
(Chemistry--Organic, TT, v. 6, no. 7)

61-18012

I. Pshezhetekli, S. Ya.  
II. Gladyshev, A. T.

18012

Office of Technical Services

Polyakov, M. V. and Kuleshina, L. P.  
MECHANISM OF IGNITION OF GASEOUS MIXTURES.  
[1961] 5p.

Order from OTS or SLA \$1.10      61-18009

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1941,  
v. 15, p. 470-474.

DESCRIPTORS: \*Gases, Ignition, Nitrogen, Oxygen,  
Methane.

The formula of Semenov connecting the lower limit of spontaneous ignition with the diameter of the reaction vessel for combustible mixtures diluted with inert gases is applicable to their ignition by a heated wire. The dependence of the lower limit upon the diameter and, consequently, the applicability of the Semenov formula is due to the induction period during which initial explosion centers accumulate up to a limit required for the explosion. The induction period and, consequently, the velocity of accumulation of the crit-  
(Chemistry-Physical, TT, v. 6, no. 7)      (over)

61-18009

L Polyakov, M. V.  
IL Kuleshina, L. P.

13177

Office of Technical Services

Electromagnetic Waves in a Hollow Conductor with  
Variable Cross-Section, by N. N. Malov, 12 p.

RUSSIAN, per, Jour Phys., 1941, Vol IV, No 5,  
pp 473-478.

SLA 59-15210

Sci  
Mar 60  
Vol 2, No 11

109660

S-178/60

(NY-4829)

Behavior of Thixotropic Colloids Under Pressure  
Congealing of Ferric Hydroxide, by O. I.  
Leypunskiy, P. E. Frank, 6 pp.

RUSSIAN, per Zhur Fiz Khim, Vol XV, No 4, 1941,  
pp 504-506.

JPRS 5736

Sci - Chem

128,418

Oct 60

The Solubility of Solid Methane in Liquid  
Nitrogen and Oxygen, by V. G. Fastovskiy,  
Yu. A. Krestinskiy, 13 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XV,  
1941, pp 525-531.

SLA 60-234516

Sci  
Vol IV, No 7  
Apr 62

CCS 60-234516

192,660

Influence of Temperature on the Detonation Limits  
of Hydrogen-Air Mixtures, by M. A. Rivin.  
UNCLASSIFIED

RUSSIAN, per, Zhur Fiz Khim, Vol XV, No 4, 1941,  
pp 533-550.

ATIC F-TS-8313

Scientific - Physics  
ATI 83148

13,499

Electron Diffraction Study of the Structure of  
Cadmium Iodide, by Z. G. Punsker, 34 pp.  
RUSSIAN, per, Zh Fiz Khim, Vol 15, No 5, 1941,  
pp 559-576.  
AEC/ANL-Tr-794-70

Sci/Phy  
Mar 70

400,187

Zhur Fiz Khim Vol 15, page 592-6 (1941)

The absorption spectra of vapors of compounds  
formed by uranium and chlorine.  
by Yu. M. Tolmachev.

AEC Trans (avail. Brookhaven)

Kravchenko, V. M.

THERMODYNAMIC CALCULATION OF QUATERNARY SYSTEMS: SYSTEM ORTHOXYLENE-METAXYLENE-PARAXYLENE-ETHYLBENZENE. [1962] 8p. 21 refs.

Order from OTS or SLA \$1.10

62-14614

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1941. v. 15, p. 652-658

DESCRIPTORS: \*Xylenes, \*Benzenes, \*Ethyl radicals, \*Thermodynamics, Thermochemistry, Solubility, \*Eutectics, Crystallization, Phase studies, Chemical equilibrium.

The method previously suggested for solving several equations for isobars of solubility to determine the coordinates of eutectic points in ternary systems was extended to quaternary systems and as an example a diagram of the quaternary system orthoxylene-metaxylylene-paraxylylene-ethylbenzene was calculated and (Chemistry--Physical, T.T. v. 8, no. 6) (over)

62-14614

I. Kravchenko, V. M.  
II. Title: System...

Office of Technical Services

Theory of Preparation of Catalysts. The Role  
of the Free Energy of the Processes of Preparation,  
by S. Z. Roginskiy, 27 p.

RUSSIAN, er Zhur Fiz Khim. Vol XV, 1941, pp  
708 730

SLA R-2941

8c1

Jul 59

92, 426

S-178/60

(NY-4829)

Thermal Decomposition and Oxidation of Sulfur Monoxide, by Ye. Kondrat'yeva, V. Kondrat'yev,  
17 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XV, No 6, 1941,  
pp 731-738.

JPRS 5737

Sci - Chem  
Oct 60

128,458

Polarization During Ion Redox Processes  
Rechargings, Ions of Iron, Thalium,  
Cerium, And Vanadium, by L. Antropov,  
E. Mizgireva.  
RUSSIAN, per, Zhur Fiz Khim, Vol XV,  
1941, pp 776-792. 9230478  
AEC-Tr-6572

Vibration Spectra of Hydrocarbon Molecules.  
I. Relation Between Vibration Form and Symmetry of  
Molecules, by M. A. El'yashhevich, 19 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XIV, No 7-8, 1941,  
pp 831-846,

Sci Tr Center RT-1140

Scientific - Physics

Jul 54 CTS

16,062

Vibration Spectra of Hydrocarbon Molecules. VII. A  
Simplified Method of Setting up Equations for the Deter-  
mination of Vibration Frequencies of Polyatomic Molecules,  
by M. A. El'yashhevich, 23 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XV, No 7-8, 1941,  
pp 847-864.

Sci Tr Center RP-1141

Scientific - Physics

16,063

Jul 54 CTS

Vibration Spectra of Hydrocarbon Molecules. VIII.  
Calculation of Constants of the Potential Energy  
According to the Vibration Frequencies of Methane and  
Ethane. By B. I. Stepanov, 21 pp.

Russlan ---, Izv. Akad. Nauk SSSR Fiz. Nauk Vol IV, no 7-8, 1941,  
pp 865-881.

Sci Tr Center RT-1221

Scientific - Physics

Jul 54 CPC 16,059

Chemical Bond in Solid Compounds I, by A. K.  
Berger, 9 pp.

RUSSIAN, per, Zhur Fiz & Khim, Vol XV, 1941, pp  
927-933

SLA R-2967

Sci

Jul 59

92,398

The Nature of Photochemical and Additive  
Coloring of Fluorite, by L. N. Shamovskiy,  
12 pp.

RUSSIAN, Zhur Fiz Khim, Vol XV, No 7-8,  
1941, pp 934-941.

Sci Tr Center  
BT-1443

Scientific - Chemistry

18,878

Diffraction of Rapid Electrons in Thin Films  
of Cellulose Esters, by V. A. Kargin, D. I.  
Leipunskaya.

RUSSIAN, per, Zh. Fiz. Khim., Vol 15, No 9, 1941,  
pp 1011-1021.  
NLL 5828.4F (11868)

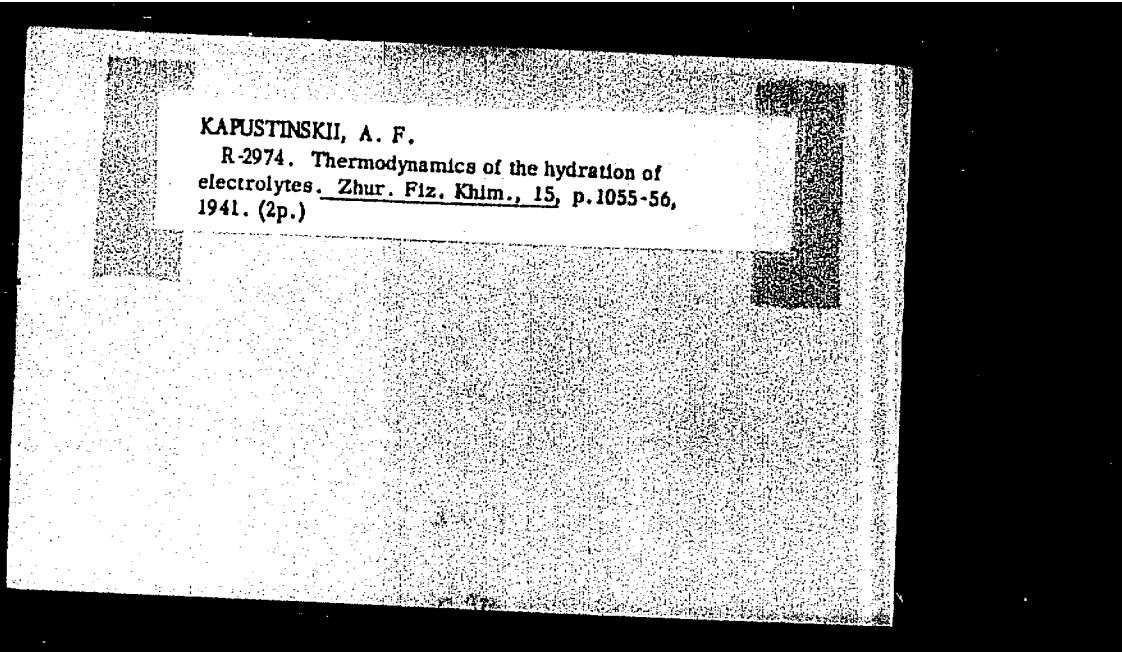
Sci - Chem  
Sept. 67

340,146

Process of Solution and Swelling of Cellulose  
Esters. II., by A. Tager, V. A. Kargin.  
RUSSIAN, per, Zh. Fiz. Khim., Vol 15, No 9,  
1941, pp 1036-1054.  
NLL 5828.4F (11854)

Sci - Chem  
Sept. 67

340,356



The Effect of Pressure on the Heat of the  
Formation of Ammonia, by I. S. Kazarnovskiy,  
and Y. S. Karapetyants, 8 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XV, No 7-8,  
1931, pp 966-973.

4

AT&T 12/12/71  
Asso Techne 80J15R

Sci

Jul 58

SLA RL-2963

69, 786

Limited Joint Solubility of Gases at High  
Pressures, by I. R. Krichevskiy, D. S. Tsviklis, 2 pp.

RUSSIAN, Per, Zhur Fiz Khim, Vol XV, No 9, 1941,  
pp. 1059.

SLA R-2973

Sci

Jul 59

92,410

Condensation of Supersaturated Vapor, by N. M.  
Tunitskiy, 13 pp.

RUSSIAN, ~~per~~, Zhur Fiz Khim, Vol XV, 1941, pp  
1061-1071.

SLA R-2972

Sci

Jul 59

92,440

Shorygin, P. P.  
QUANTITATIVE MOLECULAR SPECTRAL ANALYSIS  
[1961] 7p. 6 refs.  
Order from OTS or SLA \$1.10

61-16694

Condensed trans. of Zhurnal fizicheskoi Khimii (USSR)  
1941, v. 15, no. 10, p. 1072-1081.

DESCRIPTORS: \*Quantitative analysis, \*Raman  
spectroscopy, Theory, Toluene, Methyl radicals,  
Cyclohexanes, Hydrocarbons.

The range of applicability of quantitative analysis by  
the Raman spectra method and factors affecting the  
width and intensity of Raman lines are discussed. Data  
are given on the distribution of intensities in the  
spectra of toluene and methylcyclohexane and examples  
cited of analysis of complex mixtures of hydrocarbons.  
The available data point to a method of quantitative  
analysis of individual hydrocarbons in light motorfuels.  
(Author)  
(Chemistry--Analytical, TT, v. 6, no. 7)

61-16694  
L Shorygin, P. P.

Office of Technical Services

Highly Purified Aluminum Silicate Sols, by M. E.  
Shishniashvili, V. A. Kargin, 8 pp.

RUSSIAN, per, Zhur Pis Khim, Vol XV, 1941, pp  
1121-1128.

SLA R 2954

Sci

Jul 59

92,433

Electrochemical Determination of Thermodynamical  
Constants of Oxides of Some Metals, by I. A.  
Makokkin 5 p

RUSSIAN, per, Zhur Fiz Khim, Vol XVI, 1942, pp 13-17.

SLA R-2925

Sci

Jul 59

91, 403

Determination of Thermodynamic Constants  
of Sulfides of Mercury and Silver from  
Electromotive-Force Measurements, by I. A.  
Makolkin, 7 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVI, 1942,  
pp 18-22.

SLA R-2242

Sci

72,059

Aug 58

to the author of the original article in the *Journal of Mathematics and Physics*, Vol. 1, No. 1, 1932, "The Rounding Layer Theory," by Dr. I. S. Iyengar, 14 pp.

Original, 1932, Journal of Mathematics and Physics, Vol. 1, No. 1, 1932, pp. 1-14.

SLA/R-2645

34, 232

The Mechanism of Action of Collectors in Flotation,  
XXIII, by M. E. Lipets, 16 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVI, 1942, pp 59-  
71.

SLA/R-2626

Sci  
Apr 59

84, 881

Votinov, A., Kobeko, P., and Marel, F.  
RESEARCH ON POLYMERS. VII. DEPOLYMERIZATION  
OF LINEAR POLYMERS. [1962] 3p.  
Order from OTS or SLA \$1.10 62-14640

[Condensed] trans. of Zhurnal Fizicheskoi Khimii  
(USSR) 1942, v. 16, no. 3/4, p. 106-114.

DESCRIPTORS: \*Polymers, Decomposition, \*Styrenes,  
Methyl radicals, \*Acrylic resins, Reaction kinetics.

(Materials--Plastics, TT, v. 8, no. 7)

62-14640

I. Votinov, A.  
II. Kobeko, P.  
III. Marel, F.  
IV. Title: Depolymerization ...

Office of Technical Services

Pastovskii, V.I. and Krestinskii, Yu. A.  
SOLUBILITY OF ARGON ON LIQUID OXYGEN.  
[1962] 3p, 4 refs.  
Order from OTS or SLA \$1.10

62-14638

Trans. of Zhur[nal] Fiz[ičeskoi] Khim[ičeskoi] (USSR)  
1942, v. 16, no. 3/4, p. 148-151.

DESCRIPTORS: \*Argon, Solubility, \*Liquefied  
gases, Oxygen.

The solubility of solid argon in liquid oxygen was investigated tensimetrically at 72.8-79.095 K, and a considerable deviation of the experimental data from ideal solubility established. An empirical equation was derived permitting calculation of the solubility of argon in liquid oxygen. (Author)

62-14638

I. Pastovskii, V. I.  
II. Krestinskii, Yu. A.

Physico-Chemical Investigations of Solutions in Liquefied Gases. 29. The Catalytic Activity of Nitro-Indicators in Liquid Ammonia. Salt Effect in the Ammonolysis Reaction of Pilocarpine, by E. A. Israilevich, A. I. Shatenshtein, 19 pp.

RUSSIAN, no per, Zhur Fiz Khim, Vol XVII, No 1, 1943,  
pp 24-31.

Sci Tr Ctr RT-3486

Scientific - Chemistry

34,865

May 56 CTS/dex

Kinetics of Catalytic Oxidation of Acetylene on  
Active Manganese Dioxide, by V. Roiter, M. Rusov,  
17 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVII, No 2, 1943,  
pp 87-96.

Sci Tr Center RT-1209

SLA 61-16453

Scientific - Chemistry

Jul 54 CIS

16,045

R-478-N

Photo Chemical Nitration of Benzene and of  
Nitrobenzene by Means of Oxides of Nitrogen, by  
I. O. Gorislavets,

RUSSIAN, per, Zhur Fiz Khim, Vol XVII, 1943,  
pp 102-107.

\*JPRS for AEC

Sci - Phys  
16 Feb 61

High - Pressure Apparatus, by I. R.  
Krichevskiy and D. S. Tsiklis, 14 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVII,  
1943, pp 115-125.

SLA R-2286

Sci

Aug 58

72,191

Diffusion Phenomena at the Limits of Propagation of  
Flame: Experimental Investigation of the Inhibition  
of Explosive Mixtures of Carbon Monoxide, by N. P.  
Drozdov, Ya. B. Zel'dovich, 19 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVII(3), Moscow,  
1943, pp 135-144.

OTS TT-63-20561  
Cornell Aeronautical Laboratories  
Inc., USA  
Tr No OT/388

OTS 62-16872  
Scientific - Chemistry, diffusion, flame, explosive,  
mixtures, carbon monoxide

Index Aeronauticus S.A RT-773

Vibration Spectra of Hydrocarbon Molecules. IX.  
Calculation of Frequencies of Propane and Butane,  
by M. A. El'yashevich, B. I. Stepanov, 13 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVII, No 3, 1943,  
pp 145-158.

Sci Trans Center RT-412

Scientific - Physics  
CTS/DEY

10,897

Thermodynamic Properties of Compressed  
Ammonia, by Y. S. Kazarnoskiy and M. K.  
p/ Karapetants, 19 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVII,  
1943, pp 172-186.

SLA R-2282

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72,183

Solubility of Liquids in Compressed Gases. I.  
Solubility of Benzene in Compressed Nitrogen,  
by I. R. Krichevskiy and D. Gamburg, 13 pp.

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215-225.

SLA R-2281

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DAIN B. Ya., KUTSAYA B. F., LIBERZON E. A.  
Reactions in the electron affinity spectra of divalent chromium  
and iron ions

Zhur. Fiz. Khim., 17, No. 4, 226-235 (1943)  
TT 138 - English

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TT 138

Measurement of the Specific Volume of  
Melts in the System  $B_2O_3-SiO_2$ , by A. A.  
Leont'eva, 6 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVII, 1943,  
pp 264-268.

SIA R-2174

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72,056

The Equation of State of Krichavskiy and  
Kazarnovskiy, by M. Temkin, 2 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVII,  
1943, pp 269-270.

SLA R-2186

Sci

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72,219

The Capacity of a Mercury Electrode in the  
Presence of Polyvalent Cations, by M. Vorsina  
and A. Frumkin, 18 pp.

RUSSIAN, per, Zhur Fiz Chm, Vol XVII, 1943,  
pp 295-310.

SLA R-2283

Sci

72,025

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XN  
The Free Energy of Diffusion Double Layer, by  
A. Frumkin, 4 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVII, No 5/6,  
pp 930 300-312. 1943

SLA R-2269

Sci

Aug 58

72,162

Surface Tension of Solutions, by A. Zhukhovitskiy,  
5 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVII, No 5/6, 1943,  
pp 313-317.

SLA R-2295

Sci

Aug 58

72, 220

Zhur-Tig L'Hein,  
Vol 17, #5/6, pp 347-80 (1943)

Band Energies of Organic Compounds  
Ya. K. Syrkin

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Frank Lamer

Kinetics of Real Chemical Processes, by  
V. M. Breitman, 10 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVIII,  
1943, pp 356-363.

SLA R-2429

Sci

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Natanson, G. L. and Kagan, M. Ya.  
CATALYTIC ALKYLATION OF HYDROCARBONS IN  
THE GASEOUS PHASE. [1961] 11p. 26 refs.  
Order from OTS or SLA \$1.60

61-16918

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1943,  
v. 17, p. 381-390.

DESCRIPTORS: \*Hydrocarbons, Gases, \*Catalysis,  
Aluminum compounds, Silicates, Decomposition,  
Alkyl radicals, Benzenes, Ethylenes, Propenes,  
Toluene, Reaction kinetics

It was established that aromatic hydrocarbons can be alkylated and aliphatic-aromatics dealkylated in the gaseous phase over aluminosilicate catalysts. Mobility of the alkyl groups is brought about by these catalysts which makes double decomposition of the hydrocarbons possible. Considerations are presented pertaining to the possible mechanism of catalytic condensation of hydrocarbons. (Author)

61-16918

I. Natanson, G. L.  
II. Kagan, M. Ya.

107405

(Chemical--Physical, TT,  
v. 6, no. 9)

Office of Technical Services

Medvedev, S., Koritskaya, O., and Alekseeva, E.  
FREE RADICALS IN POLYMERIZATION PROCESSES.  
[1961] 15p. 10 refs.  
Order from OTS or SLA \$1.60

61-16902

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1943,  
v. 17, p. 391-407.

DESCRIPTORS: \*Polymerization, \*Free radicals,  
Reaction kinetics, \*Chloroprenes.

In "liquid phase" polymerization of chloroprene under  
the action of benzoyl peroxide or tetratin hydroperoxide  
free radicals can be detected by (1) liberation of iodine  
from hydrogen iodide and (2) addition of iodine. The  
second method gives satisfactory quantitative results.  
An increase of the amount of free radicals in the  
process of polymerization of chloroprene occurs (1) as  
a result of increasing viscosity of the medium, hindering  
interaction of radicals (chain rupture) and (2) be-  
cause of the branching of polymerization chains. The  
(Chemistry-Physical, TT, v. 6, no. 7) (over)

61-16902

I. Medvedev, S.  
II. Koritskaya, O.  
III. Alekseeva, E.

Office of Technical Services

On the Theory of Aerosol Filtration, by N. N. Tunický,  
I. V. Petriyanov, 8 pp UNCLASSIFIED

RUSSIAN, per, Zhur Fiz Khim, SSSR, Vol XVII, No 5, 1943,  
pp 408-413,

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Scientific - Chemistry

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Volatility of Gaseous Mixtures, by M.  
Temkin, 12 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVII,  
1943, pp 414-423.

SLA R-2297

Sci

Aug 58

72,214

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the Period 1934 to 1943, by K. S.  
Bagdasaryan, 88 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVII,  
1943, pp 424-445.

SLA R-2268

Sci

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72,156

Boreskov, G. K. and Sokolova, T. I.  
DE KINETICA VAN DE KATALYTISCHE OXYDATIE  
VAN ZWAVELDIOXYDE OP IJZEROXYDE (Kinetics  
of contact oxidation of sulfur dioxide in the presence  
of ferric oxide), 25 p. 10 refs. MTWL: 690. (Text  
in Dutch).

Order from OTS or ETC \$2. - 61-17375

Trans. of Zhurnal Fizicheskoy Khimii (USSR) 1944,  
v. 18, p. 87-101.

DESCRIPTORS: \*Oxidation, Catalysis, \*Sulfur com-  
pounds, \*Dioxides, Iron compounds, Oxides.

61-17375

I. Boreskov, G. K.  
II. Sokolova, T. I.  
III. MTWL-690  
IV. Stichting Moeilijk  
Toegankelijke Wetenschap-  
pelijke Literatuur

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Mechanism of Oxidation of Sulfur Monoxide, by  
E. Kondrat'eva, V. Kondrat'ev.

RUSSIAN, no per, Zhur Fiz Khim, Vol XVIII, No 3/4,  
1944, pp 102-109. ~~200/334~~

Assoc Tech Sv RJ-211  
\$12.75

Scientific - Chemistry  
CIS 73/Oct 1955

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(SP-1045)

Combustion of Carbon Monoxide-Oxygen Mixtures in  
Quartz Vessels, by V. N. Kondrat'yev, 9 pp.

RUSSIAN, per, Zhur Fiz. Khim, Vol XVIII, No 3/4,  
1944, pp 110-114.

JPRS 4017

Sci - Chem

Sep 60

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Thermodynamic Properties of N at Pressures from 1000 to 6000 Atmospheres, by P. E. Boleshakov, 11 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVIII, 1944,  
pp 121-130.

SLA R-2432

Sci

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Dielectric Permittivity and Dipole Moments of  
Some Organic Substances, by V. Ya. Krasil'nikov,  
22 p.

RUSSIAN, per, Zhur Fiz Khim, 1944, Vol XVIII,  
No 3, pp 174-182.

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Feb 60  
Vol 2, No 9

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Mall Re-Sensit/T-794  
107052

True Solutions, by I. R. Krichevskiy, 9 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XVIII, 1944,  
pp 187-193.

SLA R-2433

Sci

Aug 58

72,189

Vapor Pressure of Solid Acetylene, by P. Z.  
Burbo.

RUSSIAN, per, Zhur Fiz Khim, Vol XVIII, No 5-6,  
1944, pp 253-257.

Assoc Tech Serv RJ-1451  
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Sci - Chem

Apr 59

85, 324

Tsiklis, D. S.  
EXTRAPOLATION OF DATA CLOSE TO THE  
CRITICAL REGION. [1961] 2p. 5 refs.  
Order from OTS or SLA \$1.10 61-20130

Transl. of Zurnal Fizicheskoy Khimii (USSR) 1944,  
v. 18, p. 258-259.

DESCRIPTORS: \*Methanes, \*Ammonia, Solubility,  
Pressure, Temperature, Chemical equilibrium, Gases,  
Vapors.

A discussion of the mutual solubility of methane and  
ammonia under pressures up to 800 kg/sq. cm. and  
temperatures of 25° to 50° C. indicates the necessity  
of special precautions in extrapolating data close to  
the critical point. (Author)

(Chemistry--Physical, TT, v. 6, no. 12)

61-20130

I. Tsiklis, D. S.

Office of Technical Services

OverVoltage at a Mercury Cathode in Concentrated Solutions, by Z. A. Iofa and A. N. Frumkin,  
RUSSIA, per, Zhurnal Fizicheskoi Khimii,  
Vol XVIII, No 7-8, 1944, pp 268-282.  
ALL RDS 3065  
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Sci-Chem  
Apr 67

324, 446

Danilova, V. I.

PHOTOCHEMICAL DECOMPOSITION OF ACETONE  
AND BENZENE ADSORBED ON ACTIVATED CARBON  
AND ACTIVE NICKEL. [1961] 7p. 8 refs.  
Order from OTS or SLA \$1.10

61-18195

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1944,  
v. 18, p. 315-320.

DESCRIPTORS: \*Acetones, \*Benzenes, Decomposition,  
\*Photochemical reactions, Activated carbon, Nickel.

The photochemical decomposition of benzene and acetone adsorbed on active nickel and activated carbon was compared with their behavior in gaseous state. The experimental equipment permitted measurement of the increase of pressure due to secondary decomposition products which indicated the results of the experiments, in which light produced by a spark between zinc and aluminum electrodes was permitted to act on the charge either unfiltered or after elimination of light of certain (Chemistry--Physical, TT, v. 6, no. 7) (over)

61-18195

I. Danilova, V. I.

181800

Office of Technical Services

Berezovskaya, E. I., Varfolomeeva, E. K., and  
Stefanovskaya, V. G.  
INFLUENCE OF CATALYTIC ADDITIONS ON THE  
DECOMPOSITION AND FORMATION OF ORGANIC  
PEROXIDES. [1961] 8p. 13 refs.  
Order from OTS or SLA \$1.10

(C1-18194)

Transl. of *Zhurnal Fizicheskoi Khimii (USSR)* 1944,  
v. 18, p. 321-328.

DESCRIPTORS: \*Peroxides, \*Hydroperoxides, Decomposition, Hydrocarbons, Oxidation, Catalysis.

The action of catalytic additions on the decomposition of 5 peroxides was found to depend upon the chemical nature of these peroxides. The compounds studied included ethyl, tert. butyl and benzoyl hydroperoxides and benzaldehyde and acetone peroxides. The additions comprised antiknocks, knock inducers, antioxidants and an oxidation catalyst. No regularity or parallelism (Chemistry--Organic, TT, v. 6, no. 7) (over)

61-18194

I. Berezovskaya, E. I.  
II. Varfolomeeva, E. K.  
III. Stefanovskaya, V. G.

Office of Technical Services

JOURNAL OF PHYSICAL CHEMISTRY, 1944, VOL. 18, NO. 9: [TABLE OF CONTENTS AND SELECTED ABSTRACTS]. [1962] 4p. 9 refs. Order from OIS or SLA \$1.10		62-10837
Abstract trans. of Zhurnal Fizicheskoi Khimii (USSR) 1944, v. 18, no. 9, p. 329-334, #364-379, 383-385, 405-407. **A complete trans. is available in French from OIS or SLA \$4.00 as 1-15792, CEA-tr-R1024, 22 Oct 60 [50]p.		I. Title: Kinetics . . .
DESCRIPTORS: *Physical chemistry, Abstracting, *Acetylenes, *Polymerization, Nitrogen compounds, *Equations of state, Gases, Adsorption, Charcoal, Solutions, *High pressure research, *Eutectics, Azo radicals, Phenyl radicals, Naphthalenes, Chemical reactions, Reaction kinetics, Benzenea. (Chemistry--Physical, TT, v. 8, no. 6)		62-10837 (over) Office of Technical Services